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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Please amend Claims 1-22, as follows.

1. (Currently Amended) A method for allocating pinned kernel memory for use by time sensitive data communications processing, the method comprising the steps of:
 - establishing a base pinned kernel memory block;
 - accepting a request for a pinned kernel memory buffer, wherein the request comprises a specification of a buffer size for the pinned kernel memory buffer;
 - determining if the base pinned kernel memory block contains sufficient pinned kernel memory for the pinned kernel memory buffer; and
 - allocating, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block, an additional pinned kernel memory block that is at least as large as the buffer size and wherein the additional pinned kernel memory block is not required to form a contiguous pinned kernel memory section with the base pinned kernel memory block.
2. (Currently Amended) The method according to claim 1, wherein the base pinned kernel memory block, the additional pinned kernel memory block and the pinned kernel memory buffer are located within pinned kernel memory allocated by a kernel memory allocation module.
3. (Currently Amended) The method according to claim 1, wherein the additional pinned kernel memory block is accessed through a linked list structure.

4. (Currently Amended) The method according to claim 1, wherein the additional pinned kernel memory block has a predetermined size.
5. (Currently Amended) The method according to claim 1, wherein the request for the pinned kernel memory buffer is received from a mass storage data server application processing module.
6. (Currently Amended) The method according to claim 1, further comprising the steps of:
 - accepting a subsequent request for a second pinned kernel memory buffer, wherein the subsequent request comprises a second specification of a second buffer size for the second pinned kernel memory buffer;
 - determining if the base pinned kernel memory block and the additional pinned kernel memory block contain sufficient pinned kernel memory for the second pinned kernel memory buffer; and
 - allocating, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block and the additional pinned kernel memory block, a second additional pinned kernel memory block that is at least as large as the second buffer size and wherein the second additional pinned kernel memory block is not required to form a contiguous pinned kernel memory section with either the base pinned kernel memory block or the additional pinned kernel memory block.

7. (Currently Amended) A method of releasing memory allocated to a memory pool, wherein pinned memory buffers are temporarily allocated and not relocated within the memory pool and wherein additional memory ~~block~~ blocks are sequentially added to the memory pool, the method comprising the steps of:

periodically examining a set of last two memory blocks to determine if at least one memory buffer is allocated therein; and

releasing a last added additional memory block if the step of periodically examining determines that there are no memory buffers allocated within the set of last two memory blocks.

8. (Currently Amended) A system for allocating pinned kernel memory for use by time sensitive data communications processing; the system comprising:

a pinned kernel memory; and

a kernel memory allocation module, communicatively coupled to the pinned kernel memory, wherein the kernel memory allocation module:

establishes a base pinned kernel memory block within the pinned kernel memory; accepts a request for a pinned kernel memory buffer, wherein the request comprises a specification of a buffer size for the pinned kernel memory buffer;

determines if the base pinned kernel memory block contains sufficient pinned kernel memory for the pinned kernel memory buffer; and

allocating, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block, an additional pinned kernel memory block within the pinned kernel memory that is at least as large as the buffer size.

9. (Currently Amended) The system according to claim 8, wherein the kernel memory allocation module, base memory block, additional memory block and the memory buffer are located within pinned kernel memory
determines if the base pinned kernel memory block and the additional pinned kernel memory block contain sufficient pinned kernel memory for a second pinned kernel memory buffer; and
allocates, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block and the additional pinned kernel memory block, a second additional pinned kernel memory block that is at least as large as the second buffer size and wherein the second additional pinned kernel memory block is not required to form a contiguous pinned kernel memory section with either the base pinned kernel memory block or the additional pinned kernel memory block.
10. (Currently Amended) The system according to claim 8, wherein the additional pinned kernel memory block does not form a contiguous pinned kernel memory block with the base pinned kernel memory block.
11. (Currently Amended) The system according to claim 8, wherein the additional pinned kernel memory block is accessed through a linked list structure.
12. (Currently Amended) The system according to claim 8, wherein the additional pinned kernel memory block has a predetermined size.
13. (Currently Amended) The system according to claim 8, wherein the request for the pinned kernel memory buffer is received from a mass storage data server application processing module.

14. (Currently Amended) A system for allocating memory for use by time sensitive data communications processing, the system comprising:

a kernel memory; and

a kernel memory allocation module, communicatively coupled to the kernel memory, wherein the kernel memory allocation module:

establishes a base memory block within the kernel memory;

accepts a request for a memory buffer, wherein the request comprises a specification of a buffer size for the memory buffer;

determines if the base memory block contains sufficient memory for the memory buffer; and

allocating, in response to a determination that there is insufficient memory within the base memory block, an additional memory block within the kernel memory that is at least as large as the buffer size; and

The system according to claim 8, further comprising:

wherein the pinned memory buffers, wherein the pinned memory buffers are temporarily allocated and not relocated within the a memory pool and wherein additional memory blocks are sequentially added to the memory pool, and wherein the kernel memory allocation module further:

periodically examines a set of last two memory blocks to determine if at least one memory buffer is allocated therein; and

releases a last added additional memory block if the step of periodically examining determines that there are no memory buffers allocated within the set of last two memory blocks.

15. (Currently Amended) The system according to claim 8, wherein the kernel memory allocation module further:

accepts a subsequent request for a second pinned kernel memory buffer, wherein the subsequent request comprises a second specification of a second buffer size for the second pinned kernel memory buffer;

determines if the base pinned kernel memory block and the additional pinned kernel memory block contain sufficient pinned kernel memory for the second pinned kernel memory buffer; and

allocates, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block and the additional pinned kernel memory block, a second additional pinned kernel memory block that is at least as large as the second buffer size.

16. (Currently Amended) A computer readable medium including computer instructions for allocating pinned kernel memory for use by time sensitive data communications processing, the computer instructions comprising instructions for:

establishing a base pinned kernel memory block;

accepting a request for a pinned kernel memory buffer, wherein the request comprises a specification of a buffer size for the pinned kernel memory buffer;

determining if the base pinned kernel memory block contains sufficient pinned kernel memory for the pinned kernel memory buffer; and

allocating, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block, an additional pinned kernel memory block that is at least as large as the buffer size and wherein the additional pinned kernel memory block is not required to form a contiguous pinned kernel memory section with the base pinned kernel memory block.

17. (Currently Amended) The computer readable medium according to claim 16, wherein the base pinned kernel memory block, additional pinned kernel memory block and the pinned kernel memory buffer are located within pinned kernel memory allocated by a kernel memory allocation module.

18. (Currently Amended) The computer readable medium according to claim 16, wherein the additional pinned kernel memory block is accessed through a linked list structure.

19. (Currently Amended) The computer readable medium according to claim 16, wherein the additional pinned kernel memory block has a predetermined size.

20. (Currently Amended) The computer readable medium according to claim 16, wherein the request for the pinned kernel memory buffer is received from a mass storage data server application processing module.

21. (Currently Amended) The computer readable medium according to claim 16, further including computer instructions for:

accepting a subsequent request for a second pinned kernel memory buffer, wherein the subsequent request comprises a second specification of a second buffer size for the second pinned kernel memory buffer;

determining if the base pinned kernel memory block and the additional pinned kernel memory block contain sufficient pinned kernel memory for the second pinned kernel memory buffer; and

allocating, in response to a determination that there is insufficient pinned kernel memory within the base pinned kernel memory block and the additional pinned kernel memory block, a second additional pinned kernel memory block that is at least as large as the second buffer size and wherein the second additional pinned kernel memory block is not required to form a contiguous pinned kernel memory section with either the base pinned kernel memory block or the additional pinned kernel memory block.

22. (Currently Amended) A computer readable medium including computer instructions for releasing memory allocated to a memory pool, wherein pinned memory buffers are temporarily allocated and not relocated within the memory pool and wherein additional memory ~~block~~ blocks are sequentially added to the memory pool, the computer instructions comprising instructions for:

periodically examining a set of last two memory blocks to determine if at least one memory buffer is allocated therein; and

releasing a last added additional memory block if the step of periodically examining determines that there are no memory buffers allocated within the set of last two memory blocks.